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09/498,772	02/05/2000	Alex Krister Raith	P-4015.398/P10569-BMOT-US	9286

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EXAMINER

DAVIS, TEMICA M

ART UNIT PAPER NUMBER

2681

DATE MAILED: 05/20/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/498,772

Applicant(s)

Raith

Examiner

Temica M. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 10, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5, 8-26, 32-43, and 45-49 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5, 8-26, 32-43, and 45-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Reassignment Affecting Application Location

1. The art unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to art unit 2681.

Response to Arguments

2. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection. Note: Wan, U.S. Patent No. 6,385,460 is used in the rejection below with further explanation.

Claim Objections

3. Claim 5 is objected to because of the following informalities: In lines 1 and 2, "said position of said at least one additional base station" should read "the position of said at least one additional base station". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 2, 3, 8, 9, 12-14, 32-37 and 45-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Wan, U.S. Patent No. 6,385,460.

Regarding claim 3, Wan discloses a method of channel selection for a mobile station comprising determining a position of said mobile station (col. 7, lines 9-16); periodically performing channel quality measurements of signals transmitted from one or more base stations, wherein the frequency of performing said channel quality measurements is a function of said position of said mobile station (i.e., since the position/change of location is a function of its speed) (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35); and wherein said frequency of performing said channel quality measurements is a function of the relative position of said mobile station with respect to a first base station serving said mobile station and at least one

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additional base station as evidenced by the fact that as the mobile station is traveling away from the serving base station at a certain speed, the signal strength is weakening, while at the same time the mobile station is approaching another base station at that speed, wherein the mobile station is detecting a stronger signal strength and wherein this base station has will eventually become the serving base station (col. 1, lines 20-30 and col. 2, lines 21-31).

Regarding claim 8, Wan discloses a method of channel selection for a mobile station comprising determining a position of said mobile station (col. 7, lines 9-16); periodically performing channel quality measurements of signals transmitted from one or more base stations, wherein the frequency of performing said channel quality measurements is a function of said position of said mobile station (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35); and wherein said frequency of performing said channel quality measurements is a function of the length of time said mobile station remains in said position as evidenced by the fact that time is a function of the mobile stations speed and if the mobile station is not moving, the scan rate is decreased (col. 2, lines 21-31).

Regarding claim 2, Wan discloses the channel selection method of claim 8 wherein said frequency of performing said channel quality measurements is a function of the relative position of said mobile station with respect to a first base station serving said mobile station (col. 9, line 63-col. 10, line 35).

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Regarding claim 9, Wan discloses the channel selection method of claim 8 wherein said channel quality measurements are performed by said mobile station while said mobile station is in an idle mode (col. 1, lines 43-49 and col. 1, line 64-col. 2, line 2).

Regarding claim 12, Wan discloses the channel selection method of claim 3 wherein said mobile station uses said channel quality measurement for cell reselection (col. 2, lines 3-9).

Regarding claim 13, Wan discloses the channel selection method of claim 3 further including transmitting said channel quality measurements from said mobile station to a first base station serving said mobile station (col. 1, lines 20-30).

Regarding claim 14, Wan discloses the channel selection method of claim 13, further including making handoff determinations at said first base station based on channel quality measurements (col. 1, lines 20-30).

Regarding claim 33, Wan discloses a mobile station comprising a transceiver (120) for transmitting and receiving radio frequency signals; a signal processor (125) operatively connected to said transceiver for periodically performing channel quality measurements on selected signals received by said transceiver; inherent control logic for controlling said signal processor and said transceiver to vary the frequency of performing said channel quality measurements as a function of the position of said mobile station (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35); and wherein said control logic varies the frequency of performing said channel quality measurements based on the relative position of said mobile station with respect

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to a first base station serving said mobile station and at least one additional base station as explained above (col. 1, lines 20-30 and col. 2, lines 21-31).

Regarding claim 34, Wan discloses the mobile station of claim 33 wherein said control logic varies the frequency of performing said channel quality measurements based on the mobility (speed) of said mobile station (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35).

Regarding claim 35, Wan discloses the mobile station of claim 33 wherein said control logic varies the frequency of performing said channel quality measurements based on the rate of change of said position (speed) of said mobile station (col. 6, line 52-col. 7, line 16).

Regarding claim 36, Wan discloses a mobile station comprising: a transceiver (120) for transmitting and receiving radio frequency signals (figure 3); a signal processor (125) operatively connected to said transceiver for periodically performing channel quality measurements on selected signals received by said transceiver (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35); inherent control logic for controlling said signal processor and said transceiver to vary the frequency of performing said channel quality measurements as a function of the position of said mobile station (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35); and wherein said control logic varies the frequency of performing said channel quality measurements based on the length of time (as explained above in claim 8) said mobile station remains in said position (col. 2, lines 21-31).

Regarding claim 32, Wan discloses the mobile station of claim 36 wherein said control logic varies the frequency of performing said channel quality measurements based on the relative

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position of said mobile station with respect to a first base station serving said mobile station (col. 9, line 63-col. 10, line 35).

Regarding claim 37, Wan discloses the mobile station of claim 33 further including a positioning receiver for determining the position of said mobile station (col. 7, lines 9-16).

Regarding claim 46, Wan discloses a method of controlling a mobile station comprising: determining a position of said mobile station (col. 7, lines 9-16); performing a periodic task (signal quality measurements), wherein the frequency of performing said task is a function of said position of said mobile station (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35); and wherein said frequency of performing said periodic task is a function of the relative position of said mobile station with respect to a first base station serving said mobile station and at least one additional base station as explained above (col. 1, lines 20-30 and col. 2, lines 21-31).

Regarding claim 47, Wan discloses the control method of claim 46 wherein said frequency of performing said periodic task is a function of the mobility (speed/change in position) of said mobile station (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35).

Regarding claim 48, Wan discloses the control method of claim 47 wherein said frequency of performing said periodic task is a function of the rate of change of said position of said mobile station (col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35).

Regarding claim 49, Wan discloses a method of controlling a mobile station comprising: determining a position of said mobile station (col. 7, lines 9-16); performing a periodic task, wherein the frequency of performing said task is a function of said position of said mobile station

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(col. 8, lines 54-67 and col. 9, line 63-col. 10, line 35); and wherein said frequency of performing said periodic task is a function of the length of time said mobile station remains in said position (col. 2, lines 21-31).

Regarding claim 45, Wan discloses the control method of claim 49 wherein said frequency of performing said periodic task is a function of the relative position of said mobile station with respect to a first base station serving said mobile station (col. 9, line 63-col. 10, line 35).

6. Claims 15-17, 20, 21, 23, 26, 38-42 rejected under 35 U.S.C. 102(e) as being anticipated by Garceran et al (Garceran), U.S. Patent No. 6,522,888.

Regarding claims 15 and 38, Garceran discloses a method of determining the position of a mobile station comprising determining a position of said mobile station at a first time instant (col. 4, lines 14-20 and col. 9, lines 24-28; figure 4); and updating said position periodically, wherein a frequency of said updating is a function of said position of said mobile station (i.e., when the mobile station is in or near a hole in the coverage area (col. 9, lines 24-45).

Regarding claims 16 and 39, Garceran discloses the method of claim 15 wherein said frequency of updating/determining said position is a function of the relative position of said mobile station with respect to a first base station serving said mobile station (col. 9, lines 37-42).

Regarding claims 17 and 40, Garceran discloses the method of claim 15 wherein said frequency of updating said position is a function of the relative position of said mobile station

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with respect to a first base station serving said mobile station and at least one of said additional base station (col. 9, lines 37-42).

Regarding claims 20 and 41, Garceran discloses the method of claim 15 wherein said frequency of updating/determining said position is a function of the mobility of said mobile station (col. 9, lines 24-28).

Regarding claims 21 and 42, Garceran discloses the method of claim 20 wherein said frequency of updating /determining said position is a function of said position of said mobile station (col. 9, lines 33-45)

Regarding claim 23, Garceran discloses the method of claim 15, wherein said updating is performed by said mobile station while said mobile station is in an idle mode (i.e., registration/power-up mode) (col. 8, lines 10-16).

Regarding claim 26, Garceran discloses the method of claim 15, further including transmitting position information from said mobile station to said base station (col. 6, lines 31-34).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

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to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wan in view of Soliman, U.S. Patent No. 6,490,460.

Regarding claim 4, Wan discloses the channel selection method of claim 3 as described above. Wan however, fails to disclose wherein the position of the at least one additional base station is transmitted to the mobile station by said first base station.

In a similar field of endeavor, Soliman discloses power control using the position and mobility information. Soliman further discloses wherein a base station sends the position of an additional base station to a mobile station.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Wan with the teachings of Soliman for the purpose of allowing the mobile station to know the location of a possible handoff candidate.

Regarding claim 5, the combination of Wan and Soliman, discloses the channel selection method of claim 4 as described above. The combination, however, fails to disclose wherein the position of the additional base station is included in a neighbor list transmitted to the mobile station by the first base station.

The examiner contends, however, that position information of a base station can be transmitted along with a neighbor list, and the examiner takes official notice as such. At the time of invention, it would have been obvious to a person of ordinary skill in the art that to perform

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the transmission of the position of the base station together with the neighbor list for the purpose of saving system resources by not having to transmit such information in a separate message.

9. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garceran and Soliman.

Regarding claim 18, Garceran discloses the channel selection method of claim 17 as described above. Garceran, however, fails to disclose wherein the position of the at least one additional base station is transmitted to the mobile station by said first base station.

In a similar field of endeavor, Soliman discloses power control using the position and mobility information. Soliman further discloses wherein a base station sends the position of an additional base station to a mobile station.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Garceran with the teachings of Soliman for the purpose of allowing the mobile station to know the location of a possible handoff candidate.

Regarding claim 19, the combination of Garceran and Soliman, discloses the channel selection method of claim 18 as described above. The combination, however, fails to disclose wherein the position of the additional base station is included in a neighbor list transmitted to the mobile station by the first base station.

The examiner contends, however, that position information of a base station can be transmitted along with a neighbor list, and the examiner takes official notice as such. At the time

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of invention, it would have been obvious to a person of ordinary skill in the art that to perform the transmission of the position of the base station together with the neighbor list for the purpose of saving system resources by not having to transmit such information in a separate message.

10. Claims 22 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garceran and Wan.

Regarding claims 22 and 43, Garceran discloses the channel selection method of claims 20 and 38 as described above. Garceran, however, fails to disclose wherein said frequency of updating said position is a function of the length of time mobile station remains in position.

Wan discloses this limitation (col. 2, lines 10-20). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Garceran with the teachings of Wan for the purpose of conserving battery power of the mobile station if the position of the mobile station has not changed its position, by reducing the number of scanning measurements on neighboring base stations.

11. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wan in view of well known prior art.

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Regarding claims 10 and 11, Wan discloses the channel selection method of claim 3 as described above, and further discloses wherein said channel quality measurements are performed by the mobile station while the mobile station is engaged in a call (col. 2, lines 3-9).

Wan, however, is silent to the type of call currently being engaged in. The examiner contends, however, that packet and circuit switched calls are very well known in the art, and the examiner takes official notice as such.

Therefore, at the time of invention, it would have been obvious to implement packet and circuit switched calls in Wan since such types of calls are widely used in the art in order to communicate voice or data communications.

12. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garceran and well known prior art.

Regarding claims 24 and 25, Garceran discloses the channel selection method of claim 15 as described above, and further discloses wherein said channel quality measurements are performed by the mobile station while the mobile station is engaged in a call (col. 3, lines 15-25).

Garceran, however, is silent to the type of call currently being engaged in. The examiner contends, however, that packet and circuit switched calls are very well known in the art, and the examiner takes official notice as such.

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Therefore, at the time of invention, it would have been obvious to implement packet and circuit switched calls in Garceran since such types of calls are widely used in the art in order to communicate voice or data communications.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Davis whose telephone number is (703) 306-5837. The examiner can normally be reached on Monday-Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Dwayne Bost, can be reached on (703) 305-4778.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC2600 Customer Service at (703) 306-0377.

Any response to this communication should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

Or faxed to:

(703) 872-9314 (for any communications intended for entry).

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*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).*

May 18, 2003


TEMICA M. DAVIS
PATENT EXAMINER